

## Ausamics – Comparable Table: LAB Enrichment Media

Medium	Key Components / Additives	Target Organisms	Strengths	Limitations / Notes	Regulatory / Reference Use
<b>APT Broth (AS-1121)</b>	Tryptone, Yeast Extract, Glucose, Tween 80, Citrate, K <sub>2</sub> HPO <sub>4</sub> , MgSO <sub>4</sub> , MnSO <sub>4</sub> , FeSO <sub>4</sub>	Heterofermentative lactobacilli ( <i>Lb. brevis</i> , <i>Lb. buchneri</i> , <i>Lb. viridescens</i> ), <i>Pediococcus</i> , <i>Leuconostoc</i> , <i>Weissella</i>	Tween 80 supplies oleic acid → luxuriant growth of fastidious LAB; supports strains failing on MRS	Non-selective → background flora may grow; requires anaerobic/microaerophilic incubation	USDA reference broth; food industry QC
<b>MRS Broth (AS-1296)</b>	Peptone, Beef Extract, Yeast Extract, Glucose, Tween 80, Acetate, MgSO <sub>4</sub> , MnSO <sub>4</sub>	General lactobacilli (homofermentative and heterofermentative)	Standard medium for LAB; widely used in dairy and probiotic research	Some heterofermentative strains grow poorly; less effective for oleic acid-dependent LAB	ISO/IDF reference medium
<b>Tomato Juice Broth (TJA) (AS-12401)</b>	Tomato juice, Peptone, Glucose	<i>Lactobacillus</i> spp. (especially dairy isolates)	Simple, inexpensive; supports acid-tolerant lactobacilli	Poor growth for fastidious LAB; lacks fatty acids	Traditional dairy microbiology medium
<b>Rogosa Medium (AS-1399)</b>	Peptone, Yeast Extract, Glucose, Acetate, Ammonium Citrate, Tween 80	Selective for lactobacilli	High selectivity; suppresses non-LAB flora	Inhibits heterofermentative lactobacilli; not ideal for <i>pediococci</i>	Used in selective enumeration of lactobacilli
<b>Elliker Broth (AS-1218)</b>	Peptone, Yeast Extract, Glucose, Sodium Citrate	<i>Streptococcus</i> , <i>Lactococcus</i> , <i>Leuconostoc</i>	Good for dairy starter cultures	Less suitable for lactobacilli	Dairy starter culture QC

### Recommended Use Cases

**APT Broth (AS-1121)** → Best choice for heterofermentative and oleic acid-dependent LAB (e.g., *Lactobacillus brevis*, *Lb. buchneri*, *Leuconostoc*, *Weissella*). Ideal for meat, dairy, and probiotic starter cultures where strains fail to grow on MRS.

**MRS Broth (AS-1296)** → Standard medium for general lactobacilli in dairy microbiology, probiotics, and ISO/IDF reference testing. Recommended for routine QC and broad LAB recovery.

**Tomato Juice Broth (AS-12401)** → Traditional medium for acid-tolerant lactobacilli in fermented dairy products. Useful in legacy workflows but less effective for fastidious strains.

**Rogosa Medium (AS-1399)** → Selective medium for enumeration of lactobacilli in mixed cultures. Best for selective counts when background flora needs suppression.

**Elliker Broth (AS-1218)** → Preferred for dairy starter cultures (*Streptococcus*, *Lactococcus*, *Leuconostoc*). Recommended for cheese and yogurt QC labs.